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ABSTRACT

The second of three main parts designed for fifth grade students, resource unit six presents an overview of the patterns and a system of regionalization on Canada, and deals with case studies which illustrate the fact that man uses his physical environment in terms of his cultural values, perceptions, and level of technology. The approach and format in the latter part of this unit, differing from previous units, is that students prepare illustrated studies of a series of important towns and cities on a traverse across southern Canada from west to east, giving more understanding of the regions within which they are found. Pupils look first at the city today and then identify factors which helped bring about the present development. The teacher's guide ED 062 226 provides program descriptions, course objectives, teaching strategies, and an explanation of format. Other related documents are ED 061 134, ED 062 227, and SO 002 732 through SO 002 741. (Author/SJM)

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Grade Five

Unit: Canada

6

# RESOURCE UNIT

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1967

SO 002 739

# INTRODUCTION

This unit is divided into two major parts. The first provides an overview of Canada and asks pupils to regionalize Canada in several possible ways. This part of the unit is presented in the same form as previous units for the course.

The second part of the unit provides for a study of the development of a series of towns or cities. Since this part of the unit is to be handled by having pupils work in groups to collect information and present it to the class, the unit format is changed. A general introduction to each of two sections of this part is presented in terms of objectives, suggested procedures, and general materials for the group reports.

The last part of the unit suggests possible culminating activities for the unit as a whole.

OBJECTIVES

This unit should make progress toward developing the following:

GENERALIZATIONS

1. Rainfall is affected by the distance from bodies of warm water, air pressure systems, wind direction, temperature, and physical features which block winds carrying moisture.

2. Temperature is affected by the distance from the equator, elevation, distance from warm water bodies, prevailing winds, and physical features which block winds from certain directions.

   a. Temperature and seasonal differences are affected in part by distance from the equator.

   b. Temperature is affected in part by elevation; air is cooler at higher elevations than at lower elevations if latitude and distance from the sea are the same.

   c. Places in the interior of continents tend to have greater extremes of temperature than places along the coast.

      1) The ocean and other large bodies of water do not heat up so rapidly as land nor cool so rapidly as land.

      2) Winds which blow over warm bodies of water (or land areas) carry warm air to nearby land areas.

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OBJECTIVES

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3. Major climatic regions coincide approximately with major vegetation zones because vegetation is related to climatic conditions. Vegetation also affects the development of soils and is in turn affected by the soils of a region.

4. The population of a country is distributed unevenly over the earth's surface.

   a. A number of factors--climate, surface features, natural resources, accessibility, and history--affect settlement and growth patterns.

5. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

   a. The significance of location depends upon cultural developments both within and outside a country.

      1) A change in situation brings about a corresponding change in the use of a site.

   b. Political boundaries are man-made and frequently do not follow any natural physical boundaries.

   c. Whether or not a country's size provides more advantages than disadvantages depends upon the problems inhabitants face at a particular time, upon their goals, and upon their level of technology.

b. Countries trade goods which they can produce better for those which they cannot produce as profitably or at all.

c. What a country produces will depend upon demand (or how much of the product people will buy) as well as upon available resources and labor and capital.

10. Nations may pool their resources and/or power behind common goals in varying systems of alliances, combinations and cooperative projects.

SKILLS

1. Attacks problems in a rational manner.

a. Sets up hypotheses.

2. Gathers information effectively.

a. Reads social studies concepts with understanding.

b. Gains information by studying pictures. (Draws inferences from pictures.)

c. Gains information by listening.

d. Interprets tables, graphs, and charts.

e. Uses atlases and almanacs.

1) Uses atlas index to locate places.

3. Uses effective geograp

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distances and areas

b. Interprets map symb

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3) Interprets map s
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4) Interprets map s

c. Uses map scale.

d. Uses map grid of la
locate places.

e. Sets up hypotheses
from maps.

1) Draws inferences
different map pa

f. Sets up system of r
map patterns.

4. Evaluates information.

a. Checks accuracy of
background of facts

3. Uses effective geographic skills.

   a. Compares distances and areas with known distances and areas.

   b. Interprets map symbols in terms of map legend.

      1) Interprets map symbols (color layers).

      2) Interprets map symbols (color gradients and shading).

      3) Interprets map symbols (dot symbols for population density).

      4) Interprets map symbols (isotherm).

   c. Uses map scale.

   d. Uses map grid of latitude and longitude to locate places.

   e. Sets up hypotheses by drawing inferences from maps.

      1) Draws inferences from a comparison of different map patterns of the same area.

   f. Sets up system of regionalization by studying map patterns.

4. Evaluates information.

   a. Checks accuracy of information against his background of facts.

d. Types of agriculture in a region depend upon a man's cultural values, perceptions, and technology as well as upon climate, soils and topography.

e. Natural resources are of little value until man acquires the skill necessary for their utilization or sees a reason for using them.

1) Power for industry is obtained from a number of sources, including water power or steam and electricity produced by burning coal.

f. The topography of a region may present limitations given a specific level of technology.

g. Climate may set up limitations upon man's activities, given a specific level of technology, but man has learned to overcome many of the earlier limitations.

h. Man changes the character of the earth.

6. Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

a. Towns need means of shipping goods in and out; they are likely to grow up where transportation is good, particularly where different types of transportation meet.

b. Cities which become big trading centers tend to grow up where there is a break in transportation and so where goods must be moved from one type of

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a. The world is a
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transportation to another or from one company's transportation facilities to those of another company.

c. Transportation facilities are usually developed to connect population centers, although at times they are developed to open up areas of important resources.

1) Factories need good transportation facilities, but large cities with many factories and large numbers of people also attract improved transportation facilities.

7. The growth of factories in a town attract people, stores, etc., which in turn make the area more attractive to new factories and also stimulate the growth of old ones.

8. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones where boundaries are drawn between different regions.

a. Regions are delimited on many different bases, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships.

9. People in most societies of the world depend upon people who live in other communities, regions, and countries, for goods and services and for markets for their goods.

a. The world is a community of interdependent countries.

5. Organizes and analyzes information and draws conclusions.

   a. Applies previously-learned concepts and generalizations to new data.

   b. Tests hypotheses against data.

   c. Generalizes from data.

## ATTITUDES

1. Is curious about social data.

2. Is sceptical of conventional truths and demands that widely-held and popular notions be judged in accordance with standards of empirical evidence.

OBJECTIVES

A. IS CURIOUS ABOUT SOCIAL DATA.

S. Compares distances and areas with known distances and areas.

G. The world is a community of interdependent countries.

S. Interprets tables, graphs, and charts.

OUTLINE OF CONTENT

I. An Overview of Canada.

A. Canada is important

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a. Canada is t
the U.S.S.R

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OUTLINE OF CONTENT

I. An Overview of Canada.

A. Canada is important to the U.S.

1. Canada's natural resources and proximity to the U.S. and the U.S.S.R. make her friendship of vital concern to us.

a. Canada is the only nation between the U.S. and the U.S.S.R.

b. The shortest great circle routes between the U.S. and U.S.S.R. or between the U.S. and northern Europe cross Canada.

c. Canada has many resources which are important to the U. S.

1) Canada's forest resources supply the newspaper industry of the U. S. with newsprint, the largest single export of Canada.

TEACHING PROCEDURES

PART I OVERVIEW

1. Beginning without any aids have children make some guesses in response to the following questions:

   Suppose you wanted to fly from the Twin Cities to London. Over what land would you travel to save the most air miles? Suppose you wanted to fly from New York to London? Over what land would you travel? Suppose you wanted to fly from Chicago to Moscow? Over what land would you travel? Suppose you wanted to fly from the Twin Cities to Helsinki, Oslo, Reykjavik, Berlin, Rome?

   Have pupils use pieces of string, cardboard cut-outs, and a globe to find the shortest routes for each.

   From the activity and discussion be sure children understand why Canada is so important to us in the air age.

2. Have pupils check their student almanacs to find out the percentage of certain minerals used in the U. S. which the U. S. must import.

MATERIALS

make some guesses

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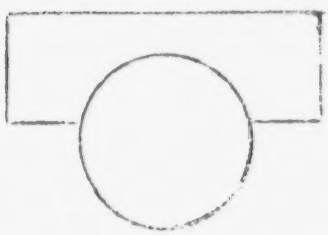
Classroom globe.
Student desk globes, if possible.
String, cardboard cut-outs.
Pieces of cardboard which are cut-
out to fit over the globes
(see illustration).



"Student Almanac."

S. Interprets map symbols in terms of map legend.

G. People in most societies of the world depend upon people who live in other communities, regions, and countries for goods and services and for markets for their goods.

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S. Interprets tables, graphs, charts.

G. Countries trade goods which they can produce better for those which they cannot produce as profitably or at all.

G. What a country exports depends upon demand abroad as well as upon available resources, labor, and capital.

2. Canada an
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2) The largest asbestos resource in the world is found in southeastern Canada.

3) Nickel, vital in the steel industry, is primarily supplied by Canadian mines.

2. Canada and the U. S. have been cooperative neighbors for over a hundred years.

a. U. S. -- Canada trade is heavy; each country is the other's leading customer.

Now project a chart showing leading industries of Canada. Ask: Which of these minerals which the U. S. needs is produced in Canada? Why would this be important for the U. S.? for Canada? Tell the class that the U. S. also has to import large quantities of pulp and paper, petroleum, and natural gas and gets much of what it needs from Canada.

Or have pupils check minerals maps to check to find out which of these minerals are produced in Canada. Then ask the questions suggested in the paragraph above. Also project a map showing petroleum and gas lines to the U. S. and tell the class about pulp and paper imports. However, if maps are used, merely have pupils identify the presence or absence of minerals, not the location at this time.

3. Project charts of exports and imports. Ask questions such as the following:

   a. What years are being covered in this chart?

   b. What does $'000 mean under each year?

   c. What is Canada's leading export?

   d. What exports seem to have increased the most during the years indicated? (petroleum, gas by pipeline)

   e. What went down, then up between 1960 and 1962? (aluminum, iron ore, farm implements)

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the U. S.? for Canada?
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Harrington, How People Live in Canada, p. 50.

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Then ask the questions
project a map showing
tell the class about
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For maps, see materials opposite activity #25 below.

Ask questions such as

chart?

Charts found in Canada 1964.
p. 255 - Exports of Canada.
p. 257 - Imports of Canada.

the most during the
pipeline)

and 1962?
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S. Interprets tables, graphs, and charts.

G. Countries trade goods which they can produce better for those which they cannot produce as profitably or at all.

S. Interprets tables, graphs, and charts.

S. Gains information by studying pictures.

S. Gains information by listening.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

b. The St. Lawrence Seaway was developed with the support of both Canada and the U. S.

f. What has dropped each year? (radioactive ores, rubber)

4. To establish to whom and from whom Canada exports and imports, project charts of exports and imports by leading countries. Discuss reasons for this kind of pattern. Ch

   a. Who is Canada's best customer? Why?

   b. To what nation unfriendly to the U. S. is Canada shipping? What would you guess the commodity to be?

   c. From whom does Canada buy the most? Why?

5. To establish Canada's rank in volume of world trade as compared with the U. S., project the top half of the chart on Canada's rank in world trade. It shows total trade for 1961 and 1962. Ch

   a. How do we interpret the figures?

   b. Which country has the largest share of world trade?

   c. Where does Canada rank? What other country trades about as much as Canada?

6. If pupils did not study the St. Lawrence Seaway during their study of the U. S., have them do so now, using the activities suggested in the earlier unit. Otherwise, merely review its importance and remind the class that it was a cooperative venture between the U. S. and Canada.

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Canada exports and
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Charts found in Canada 1964.
p. 260 - Imports by Leading Countries.
p. 261 - Exports by Leading Countries.

Chart found in Canada 1964.
p. 249 - Canada's Rank in World Trade.

G. Nations may pool their power behind common goals in varying systems of alliances, combinations and cooperative projects.

G. Political boundaries are man-made and frequently do not follow any natural physical boundaries.

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A. IS CURIOUS ABOUT SOCIAL DATA.

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c. The longest unfortified boundary in the world makes travel possible between the two countries without an official passport.

d. Differences between the U. S. and Canada have been settled peacefully since 1812.

7. Ask: How many of you have crossed into Canada for a visit? Ask questions about the experience such as the following:

   a. What did it look like to cross the border?

   b. What must be shown to the officers at the port of entry?

   c. Was a passport essential?

   d. Are there any regulations which we must follow? Do the American authorities have any regulations? (Use official folder to answer these questions.)

   e. What do the boundaries look like? The border towns?

   Compare travel to Canada with travel to a European country. Some children may be able to share first hand experience. Present, if possible, an actual passport which gives evidence of the process of checking between European borders.

8. Ask: Why do you think the boundary is not fortified and that we don't have to have passports to travel between U. S. and Canada?

   On the chalkboard, list the wars in which the United States has been involved. Star any in which Canada and the United States were on opposing sides. (Most recent encounter was the War of 1812 when U. S. forces invaded Canadian soil from Detroit and two other locations).

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Pictures of customs and immigration entries (e.g., Borchert and McGuigan, Geog. of the New World, p. 321 and Canada, 1964, p. 42.)

Folder of information for travelers to Canada, Canada Border Crossing Information.

Chalkboard.

G. The world is a community of interdependent countries.

G. The significance of location depends upon cultural developments both within and outside a country.

G. Nations may pool their resources and/or power behind common goals in varying systems of alliances, combinations and cooperative projects.

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A. IS CURIOUS ABOUT SOCIAL DATA.

G. Nations may pool their resources and/or power behind common goals in varying systems of alliances, combinations, and cooperative projects.

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e. Radar warning systems (D.E.W., Mid-Canada, and Pine Tree lines) are cooperative projects.

f. There is a system of cooperative weather stations spanning the Arctic.

9. Remind pupils of the shortest air route between the U. S. and the U.S.S.R. and the possible danger of air attacks. Ask: How could Canada help us against such an attack? Perhaps project a map showing the radar warning systems in Canada and tell pupils how they were developed and are run. Ask: Do you think Canada was as important to us prior to the development of the plane and missiles?

   Project pictures of Cape Dyer. Ask such questions as the following to guide interpretation:

   a. How would you describe the landscape of Cape Dyer on Baffin Island which is a D.E.W. outpost?

   b. What season is this?

   c. Do you think any plants grow in this area at any time of the year?

   d. How can we estimate the height of objects seen in the pictures?

   e. How might we explain the coloring of the pictures?

10. Locate Ellesmere Island and Point Alert (on N.E. tip of island only 450 miles from the North Pole). Inform the class that at this site U. S. and Canadians have a common interest. Have the class suggest possibilities.

    Locate the island in the middle of Norwegian Bay, indicating that here, too, is a cooperative enterprise. (Interest in weather not only for pure research but for aviation is reason for stations.)

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of air attacks. Ask:
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For map, see U. S. Dept. of State, background series in Canada, Free-World Partner, p. 26 or Wahl, Geog. of Canada, p. 4.

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Moore, Canada, pp. 112-113.
Life, March 1, 1963, pp. 20-21.

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Inform the class that at
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Wall map of Canada.
Bixby, Skywatchers, the U. S. Weather Bureau in Action.

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S. Gains information by listening.

S. Compares distances and areas with known distances and areas.

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S. Uses atlases and almanacs.

b

S. Compares distances and areas with known distances and areas.

B. Canada, ranking among the largest nations in the world in terms of area, has a population below many others.

1. Canada is the second largest nation in the world; it is exceeded in size only by the U.S.S.R.

a. The U.S. (including Alaska) is slightly smaller than Canada.

b. All of Europe is only slightly larger than Canada.

An interesting account of a unique power source on a remote island outpost in Norwegian Bay is found on p. 127-128 of Bixby. Read it aloud to the class.

An individual pupil might write to the U. S. Weather Bureau in Washington for additional information about these Arctic stations.

11. Have the class make guesses as to which country is the largest in the world. Record these guesses on the chalkboard.

    Attempt to arrive at some agreement as to the largest country, using only the globe and wall maps. Make a list of other large countries in the world. Attempt to establish Canada's size as compared with other nations in the world.

    To assist in establishing this comparison, hand several prepared cut-outs of Canada traced from the globe used in the classroom. Place over such countries as U.S.S.R., U. S., China, Brazil, Australia.

    Question the accuracy of the comparison. Where does Canada rank? Is it second, third, or fourth?

    Discuss sources for checking the accuracy of the comparisons. Have children check the atlases and almanacs they suggest.

    Globe.
    Wall maps of world.
    Tracing paper.
    Atlases (world)
    Almanac.

12. Now have a pupil place a cut-out of Canada over Europe (on globe). Ask: How do the two compare in size?

    Globe.
    Cut-out of Canada.

S. Uses different map scales.

S. Uses latitude and longitude.

S. Compares distances with known distances.

S. Recognizes distortion on maps.

2. Canada
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S. Interprets tables, graphs and charts.

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2. Canada's east-west length makes its east coast closer to Europe than to its own west coast; Canada's north-south width occupies the northern half of the northern hemisphere.

   a. Canada extends nearly 4,000 miles east and west.

   b. Canada extends about 3,000 miles north and south.

3. Canada has a relatively small population despite its size.

13. Have pupils check a scale shown on the map they are using. (It is best to limit scales to inches to miles, or better yet, a graphic scale, eliminating the ratio or representative fraction scale.) Have pupils do the following:

    a. Locate the most northern and most southern points of Canada, measure distance, and compute distance between them. (Should be approximately 3,000 miles.)

    b. Locate the most eastern and most western points of Canada, measure distance, and compute distance between them. (Should be approximately 3,500 miles.)

    c. Measure another map and compare with previous calculations.

    d. Have class discuss results.

    e. Attempt to establish explanations for differences which have occurred (e.g., inaccurate measurement, inaccurate arithmetic, distorted projections of Canada.)

    f. Compare distances with east-west and north-south distances in the U.S.

    g. Ask: Is it further from Canada's east coast to Europe or from the east coast to the west coast? What difference does this make?

14. Have pupils again suggest fairly accurate sources for finding the area and population of major countries of the world.

    Have pupils look at the table in the "Student Almanac" to find out where Canada ranks in size of area and in population among the nations of the world. Have several pupils make graphs to illustrate this data.

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miles, or better yet, a
or representative fraction
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Map rulers.
String.
Various sized maps of Canada so that a variety of scales is available (wall maps, government maps, maps in textbooks so that each pupil has at least two different opportunities to measure)

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Population table and area table in "Student Almanac."

"Student Almanac" to find
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S. Sets up hypotheses.

G. Whether or not a country's size provides more advantages than disadvantages depends upon the problems inhabitants face at a particular time, upon their goals, and upon their level of technology.

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S. Interprets map symbols (color gradients and shading).

S. Sets up hypotheses.

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4. Although immense size may hinder a country's development, it may be an asset as well.

   a. The cost of transportation and communication links has been high.

   b. The world is in demand of new land and undeveloped resources which Canada offers.

   c. Canada also offers possibilities for expanded food production.

C. Physiographic regions of the U.S. are extended into Canada, where land and land use are similar.

   1. Rocky Mountain region extends into Canada as the Canadian Rockies.

   2. The Great Plains region extends into Canada. Woodlands of the western Great Lakes region extend into the Canadian Shield.

15. The teacher may set the stage for a discussion of the advantages and disadvantages of Canada's immense size by proposing the following situation:

> If you were an official of the Canadian government in a national development office, what would you feel to be the advantages and disadvantages of Canada's size?

Have a class secretary fill out the following chart on the chalkboard as contributions are offered:

CANADA'S SIZE

| Advantages | Disadvantages |
|---|---|

It is hoped that as pupils begin making contributions, they will realize that mere size alone is not the only important factor in growth and development. They should indicate a desire to know more about the land -- its climate, soil, land forms, rainfall, vegetation, resources.

16. Show pupils a physical map of Canada. Have them study the map legend before examining it more carefully. Have pupils identify the major topographical features of Canada.

Physical map of Canada.

Physical map of North America.

Ask: Do these topographical patterns remind you of anything you have studied earlier? Now show pupils a physical map of North America and have pupils compare the topographical features

3. The Appal
mountains

S. Sets up hypotheses.

D. Canada posse
remote areas

S. Uses atlas index.

1. Canada ha
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2. Of Canada
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E. Canada has a
portation in

S. Sets up hypotheses.

3. The Appalachian Mountains continue as the old mountains of the Canadian east.

D. Canada possesses a vast coastline but still has many remote areas.

1. Canada has the longest coastline on the northern waters of the North Atlantic, North Pacific, and Arctic Oceans.

2. Of Canada's ten provinces (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland), only two, Alberta and Saskatchewan, have no outlet to the sea.

3. The mainland seacoast is 17,860 miles in length; island coastlines cover 41,810 miles.

E. Canada has a vast river system, which has aided transportation in the country.

of Canada and the United States. Ask: What similarities are there? Do we share the same kinds of elevation? topography? Are the topography and elevation similar between selected lines of longitude? What places in Canada might look like places in the United States? How would Winnipeg compare with parts of Minnesota? Would the United States have any cities with a topography like that of Edmonton's?

17. Distribute ditto or preferably commercially prepared maps of Canada, showing river, land, and seacoast outlines. Have pupils locate the following bodies of water:

| | |
|---|---|
| Atlantic Ocean | Hudson Bay |
| Labrador Sea | Beaufort Sea |
| David Strait | Arctic Ocean |
| Baffin Bay | Pacific Ocean |
| | Great Lakes |

Ask: How useful do you think the Bays and Seas and Lakes would be to Canada for transportation?

18. Have pupils use the same map to locate the following river systems:

| | |
|---|---|
| Mackenzie | Saskatchewan |
| Frazer | St. Lawrence |
| N. Thompson | Peace |
| Red of the North | Athabaska |
| | Coppermine |

tes. Ask: What similarities are there?
f elevation? topography? Are the top-
r between selected lines of longitude?
look like places in the United States?
ith parts of Minnesota? Would the United
a topography like that of Edmonton's?

ly commercially prepared maps of Canada,
coast outlines. Have pupils locate the

Hudson Bay
Beaufort Sea
Arctic Ocean
Pacific Ocean
Great Lakes

k the Bays and Seas and Lakes would be
?

Desk outline maps such as Nystrom's DD-5M map of Canada in two colors and 10½" x 15" size.
Atlases
Wall maps
Textbooks

to locate the following river systems:

Saskatchewan
St. Lawrence
Peace
th Athabaska
Coppermine

S. Checks hypothese against data.

S. Uses latitude and longitude.

S. Sets up hypotheses and checks against data.

G. Temperature and seasonal differences are affected in part by distance from the equator.

F. Canada has

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F. Canada has a great range of temperature patterns.

1. Canada's latitude places the country in a northerly orientation, although a part of Canada extends farther south than some of the U. S.

   a. Canada ranges in latitude from 41° 47' at Pelee Island to 83° 07' at Cape Columbia.

   b. Half the land mass of the world lies between those latitudes, including part of the U. S., U. K., France, Germany, other European nations, U.S.S.R., and northern China and Japan.

   c. The southern tip of Canada's diamond shape or toe of Ontario dips deeply into the industrial U. S.

      1) There are eight U. S. states, with land which lies farther north than this point.

      2) This tip is more southernly than the northern boundary of California.

With a pencil of another color identify sources and mouths of rivers (e.g., locate with S. and N.).

Have class hypothesize about Canadian drainage patterns and about the usefulness of the rivers for transportation at different times of year.

From drainage pattern seen by river systems and physical maps, a few individuals could make a plastic relief map to illustrate drainage pattern. If possible, use an Aero-space map such as that of Canada or North America available from Nystrom to verify proposed drainage pattern.

19. Have class find the latitude and longitude for the following extremes of Canadian boundaries:

a. Northern tip of Ellesmere Island
b. St. John's Newfoundland
c. Cape Columbia
d. Port Arthur, Ontario
e. Vancouver Island
f. Pelee Island
g. Western edge of the Yukon

Determine the range of latitude and longitude for the country. Have class find other countries which have land north of the Arctic Circle. Have class find other countries which lie north of Port Arthur, Ontario. Have pupils find which U. S. states lie north of Pelee Island.

Ask: What difference does Canada's location in the northern hemisphere make? What would you expect to find true of temperatures in different parts of Canada? Why?

identify sources and mouths of
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river systems and physical maps, a
lastic relief map to illustrate
, use an Aero-space map such as
a available from Nystrom to verify

nd longitude for the following extremes

Maps of Canada which clearly indicate latitude and longitude.

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and longitude for the country.
which have land north of the Arctic
countries which lie north of Port
find which U. S. states lie north of

da's location in the northern hemisphere
find true of temperatures in different

S. Interprets map symbols (isotherm).

G. Temperature is affected by the distance from the equator, elevation, distance from warm water bodies, prevailing winds, and physical features which block winds from certain directions.

G. Temperature is affected in part by elevation; air is cooler at higher elevations than at lower elevations if latitude and distance from the sea are the same.

G. Places in the interior of continents tend to have greater extremes of temperature than places along the coast.

G. The ocean and other large bodies of water do not heat up so rapidly as land nor cool so rapidly as land.

G. Winds which blow over warm bodies of water (or land areas) carry warm air to nearby land areas.

S. Applies previously-learned concepts and generalizations to new data.

2. Tempe
conti
latit

G. Precipit
country

2. Temperatures are affected by elevation and continental influences as well as by the high latitudes.

G. Precipitation varies greatly from one part of the country to another.

20. Give pupils an outline map of Canada, showing the lines of latitude and a series of cities and towns with the same January temperature. Have pupils connect towns with the same temperatures. (Clarify meaning of isotherm.) Now ask: Why do isotherms cut across lines of latitude instead of running parallel with them? (Or, why do you find towns and cities with different temperatures even though they are at the same latitude?) What might explain this temperature pattern? (distance from water bodies, elevation, etc.) Have pupils compare isotherm map with elevation map to help check hypotheses. Review the influence of oceans on temperatures.

    Now have pupils examine maps showing average January and July temperatures.

21. Have pupils examine the physical map of Canada once more. Ask: Where do you think there might be heavy precipitation? light precipitation? average precipitation? Why? Have pupils use an outline map of Canada to construct a probable precipitation pattern, using broad categories within different boundaries.

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January and July

Teacher-made map. Use temperature maps in:
Deasy, World's Nations, p. 155 or
Wahl, Geog. of Canada, pp. 13-14.

da once more. Ask:
ipitation? light
Have pupils use
able precipitation
rent boundaries.

For a precipitation map of Canada, see: Hills and Hills, Canada, p. 38 or Deasy, et. al., World's Nations, p. 155, or Wahl, Geog. of Canada, p. 17.

S. Sets up hypotheses.

S. Interprets map symbols (color layers).

S. Tests hypotheses against data.

G. Rainfall is affected by the distance from bodies of warm water, air pressure systems, wind direction, temperature, and physical features which block winds carrying moisture.

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S. Applies previously-learned concepts and generalizations to new data.

S. Tests hypotheses against data.

G. Major climatic regions coincide approximately with major vegetation zones because vegetation is related to climatic conditions. Vegetation also affects the development of soils and is in turn affected by the soils of a region.

1. The southern part of Canada has a precipitation pattern much like that in the northern part of the United States. The influences at work to produce this pattern are much the same in both countries.

2. Further north, the dry area extends further west and east in Canada than in the United States.

3. The northernmost parts of Canada have very little precipitation.

Now have pupils compare their hypothetical precipitation maps with an actual map of precipitation in Canada. If there are any major differences, have pupils investigate to find out why these differences exist.

Have pupils look at a map of precipitation of North America as a whole. Ask: How do you explain the similarities in precipitation between the northern part of the U. S. and Sourthern Canada? How do you explain the fact that further north in Canada, the drier areas extend further east and west than in the U. S.? How do you explain the very dry area across all of the most northern part of Canada? Why don't Hudson Bay and the Arctic provide moisture, just as the Atlantic and Pacific do?

22. Ask: Given what you know about the topography, temperature, and precipitation of Canada, what kinds of vegetation would you expect to find in different parts of Canada? Why? Have pupils use outline maps of Canada to draw in probable vegetation patterns, including long and short grass areas, areas of tundra plants, areas with broad leaf trees, and areas of needle leaf trees.

Now have pupils compare their maps with an actual map of vegetation. Where there are differences, pupils should investigate to discover reasons for them.

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similarities in precipitation
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and the Arctic provide
cific do?

For a precipitation map of North America, see: Goode's World Atlas, or Kohn and Drummond, The World Today, p. 53.

pography, temperature, and
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Canada? Why? Have pupils
probable vegetation patterns,
areas of tundra plants, areas
eedle leaf trees.

For vegetation maps and maps of different types of forests, see: Wahl, Geog. of Canada, pp. 28, 36.
Hills and Hills, Canada, p. 86.

th an actual map of vegetation.
hould investigate to discover

S. Sets up hypotheses.

S. Tests hypotheses against data.

G. Soil type in a particular place is affected by the type of basic rock in the region, the climate, vegetation, erosion, wind, glaciers, and rivers which move soil, as well as by how man treats the soil.

S. Reads social studies concepts with understanding.

G. Types of agriculture in a region depend upon man's cultural values, perceptions, and technology as well as upon climate, soils, and topography.

S. Sets up hypotheses.

S. Tests hypotheses against data.

23. Ask: On the basis of what you now know, what kinds of soils would you expect to find in the different parts of Canada? Perhaps have pupils use an outline map to try to draw in probable soil types with which they are already acquainted. Remind them to consider temperature patterns as they do this. For

    Have pupils check their hypothetical maps of soil types with an actual map of soil types. If they differ, discuss reasons for the differences. You will undoubtedly have to spend time having pupils read to find out what they can about tundra soil and permafrost. Geog Book

24. Review with class the meaning of extensive and intensive farming. Where would pupils expect to find examples of each in Canada? What kinds of agricultural activity could they expect to find in different parts of Canada? (crops, land use, etc.). Have pupils divide into groups to check maps and textbooks to test their hypotheses. For Geog

25. Show pupils maps of different kinds of minerals and fuel resources in Canada. Make sure that they examine the map legend before they identify important mining areas. Now have pupils use this data and the other data which they have collected to predict major types of economic activity in different parts of the country. For Hill

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| know, what kinds of soils would<br>t parts of Canada? Perhaps have<br>o draw in probable soil types<br>nted. Remind them to consider<br>is. | For a soil map, see: Wahl,<br>Geog. of Canada, p. 32. |
| al maps of soil types with an<br>differ, discuss reasons for<br>edly have to spend time having<br>can about tundra soil and perma- | Geography textbooks.<br>Books on Arctic; see bibliography. |
| xtensive and intensive farming.<br>examples of each in Canada?<br>y could they expect to find in<br>, land use, etc.). Have pupils<br>nd textbooks to test their | For a map of agricultural activities,<br>see: Hills and Hills, Canada,<br>pp. 72, 77, or Canadian Dep't.<br>of External Affairs, Facts on<br>Canada, p. 20.<br>Geography textbooks and references. |
| s of minerals and fuel resources<br>amine the map legend before they<br>Now have pupils use this data<br>collected to predict major<br>erent parts of the country. | For mineral maps, see: Saveland<br>and Glendinning, World Resources,<br>Western Hemisphere, pp. 142,<br>144<br>Hills and Hills, Canada, p. 100. |

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

S. Sets up hypotheses by drawing inferences from maps.

G. The population of a country is distributed unevenly over the earth's surface.

G. A number of factors--climate, surface features, natural resources, accessibility, and history--affect settlement and growth patterns.

S. Interprets map symbols (dot symbols for population density.)

S. Tests hypotheses against data.

S. Interprets tables, graphs, and charts.

H. The population of Canada is distributed unevenly. There are centers of dense population and also very remote, unpopulated areas. Most people live in the southern part of the country.

1. Nine-tenths of the population live within 200 miles of the U. S. border.

2. About 19 million people inhabit Canada.

   a. They share a standard of living common to the U. S.

   b. There is little illiteracy.

3. The most densely populated area of Canada is the S.E.

4. Other population centers are in the plains and southwest mountain regions.

I. The Canadians stem from various backgrounds, predominantly European.

Have pupils check their hypotheses or hypothetical maps against a map of major economic activities. (Explain the terms used, if necessary.) If there are major differences, why do they differ?

26. Ask pupils to develop hypothetical maps about where most people would tend to live, where smaller concentrations of population would be found, and where population densities would be very low. Discuss reasons for their hypotheses.

    Have pupils check their hypothetical maps against a map of population density. Discuss any differences which appear between their maps and the actual map. Can they think of any other factors which might affect population densities which they have not discussed so far?

27. Show chart of population estimates for urban centers. Ask: Which single nationality background is greatest in Canada? Which holds a close second place? What percent originates from the British Isles? How can we tell that all the urban population is supposed to be included in the chart.

thetical maps against a
n the terms used, if
s, why do they differ?

Canadian Dep't. of External Affairs, Facts on Canada, p. 18.
For a map of major economic activities, see: Deasy, et. al., World's Nations, p. 154, or Kohn and Drummond, World Today, p. 202.

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For a population map, see: Moore, Canada, p. 11.
Borchert and McGuigan, Geog. of the New World, p. 325.
Wahl, Geog. of Canada, p. 36.
Deasy, et. al., World's Nations, p. 158.

an centers. Ask: Which
in Canada? Which holds
iginates from the
he urban population is

Department of External Affairs, Canada From Sea to Sea, p. 136 (chart).

S. Sets up hypotheses by drawing inferences from maps.

G. Transportation facilities are usually developed to connect population centers, although at times they are developed to open up areas of important resources.

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1. The distribution is as follows:
   a. 30% - French
   b. 23% - English
   c. 10% - Scotch
   d. 25% - Irish
   e. 1% - Indian and Eskimo
   f. 1% - Oriental
2. There is much cultural similarity between U. S. and Canada with one major exception--Southern Quebec.
   a. Both Canada and the U. S. are predominantly English speaking, Protestant, and have their roots in British customs.
   b. Southern Quebec is populated by Canada's original European settlers who were French and Roman Catholic.

J. Canada's transportation system has an east-west orientation coinciding with population centers.

1. The St. Lawrence Seaway forms a key transportation route.
2. Railroads span the country from coast to coast.

28. Project a map of population distribution once more. Ask the class to make hypotheses as to where railroad and highway transportation routes would lie. Project maps of railroads, highways, and air routes. Have pupils generalize about the relationships.

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once more. Ask the class
nd highway transportation
ads, highways, and air
relationships.

For railroad maps, see: Borchert and McGuigan, Geog. of the New World, pp. 328, 338. Deasy, et. al., World's Nations, p. 168; Hills and Hills, Canada, p. 118.

For a map of highways, see: Hills and Hills, p. 116. For a map of air routes, see: Hills and Hills, p. 121.

S. Applies previously-learned concepts to new data. K.

S. Sets up system of regionalization by studying map patterns.

G. Regions are delimited on many different basis, depending upon the purpose of the study. Some are delimited on the basis of a single phenomenon, some on the basis of multiple phenomena, and some on the basis of functional relationships. L.

3. The trans-Canada highway links Quebec and Vancouver.

4. Air routes also follow the east-west population pattern; however, some routes cross the frontier--especially international flights along great circle routes and flights to remote areas.

K. Canada can be divided into five physiographic regions, and a sixth is differentiated by climate.

1. The Appalachian or Maritime region.
2. Canadian or Laurential Shield.
3. The St. Lawrence Lowlands.
4. The Great Plains.
5. The Cordilleran region.
6. The Far North or Arctic Circle region.

L. Or other systems of regionalization can be used, depending upon the geographer's purpose.

29. Ask the class to indicate other forms of transportation. After suggestions are made, the filmstrip, Transportation, could be viewed to check and complete the list.

30. Have children present some schemes, with rationale behind them, for regionalizing Canada.

    Using an opaque projector, present regionalizations as presented by different writers. Discuss criteria which each uses in his regionalization.

rms of transportation. After
p, Transportation, could be
ist.

Filmstrip: Transportation (87C)
from set Canada: A Regional
Study, Eyegate House, Inc.

, with rationale behind them,

Various writers and regionalization
of Canada, e.g.
1. Facts on Canada, p. 4.
2. The Wakening North, p. 8.
3. Tor, Getting to Know Canada.
4. Borchert, p. VI in table of
contents for Chapter 6.

regionalizations as presented
teria which each uses in his

G. A region is an area of one or more homogeneous features. The core area is highly homogeneous, but there are transitional zones whose boundaries are drawn between different regions.

31. Have pupils accept some stystem of regions. Have them develop a chart to illustrate the characteristics of the different regions, just as they did for the regions of the United States. They should do so on the basis of the maps which they have studied. Then have the class divide into groups to read rapidly descriptions of different regions. Each group should report back to the class only changes which they think should be made on the chart. Develop a revised chart if necessary and hang it on the wall of the classroom.

32. Show pupils a series of pictures of different physical features and human activities in Canada and have pupils try to identify the region which they represent.

33. Perhaps show a film which presents regions and some major characteristics of each region. Film also reinforces the idea that physical regions of the United States extend into Canada.

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Film: Canada: Geography of the Americas, Coronet, 13½ min.

PART TWO -- OBJECTIVES

Skills

S. Uses atlas index to locate places.

S. Uses lines of latitude and longitude to locate places.

S. Sets up hypotheses.

S. Interprets map symbols in terms of the legend.

S. Draws inferences from a comparison of different map patterns of the same area.

S. Draws inferences from pictures.

RT TWO -- OBJECTIVES

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Generalizations

G. The population of a country is distributed unevenly over the earth's surface.

G. A number of factors--climate, surface features, natural resources, accessibility, and history--affect settlement and growth patterns.

G. Towns need means of shipping goods in and out; they are likely to grow up where transportation is good, particularly where different types of transportation meet.

G. Cities which become big trading centers tend to grow up where there is a break in transportation and so where goods must be moved from one type of transportation to another or from one company's transportation facilities to those of another company.

G. Improved transportation facilities make possible wider and bigger markets as well as better and less costly access to resources.

G. Factories need good transportation facilities, but large cities with many factories and large numbers of people also attract improved transportation facilities.

PART TWO --- CITIES AND TOWNS --- PROCEDURES AND CONTENT

I. Important Cities in Southern Canada.

Teaching Procedures

Tell the class that they are not going to study Canada in quite the same way that they studied the United States. Canada has many large cities which have grown up for a variety of reasons. The class will take a quick look at pictures of some of these cities and look at their locations in terms of a number of map patterns in an attempt to find out something about each city and why it developed. Groups of pupils will check these hypotheses quickly by looking at textbooks and other references. Then the class will divide into groups to study a number of towns and cities which are of comparatively recent origin or which have developed rapidly only in recent years because of some specific discovery, invention, or decision to use the area.

Before the class begins this section of the unit, divide the class into groups, perhaps using a sociometric means of setting up the groups. Then assign the job of looking up data for each city, after pupils have established hypotheses for that city, so that the group will not begin checking before hypotheses are developed.

Take the class on a traverse trip across southern Canada, from west to east, looking at a series of cities or towns: Vancouver, Calgery, Edmonton, Winnipeg, Sundbury, Toronto, Montreal, Quebec, St. Johns, and Halifax.

For each, have pupils use an atlas index to locate the city or town on a physical-political map. Then have them examine other map patterns which show topography, temperature, rainfall, vegetation, minerals, and agricultural use, railroads, highways,

CONTENT

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ocate the city or
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MATERIALS

General Materials

Wall map of Canada (Physical-Political).
Atlas
For temperature maps, see Deasy, World's Nations, p. 155.
Wahl, Geog. of Canada, pp. 13-14.
For rainfall maps, see Hills and Hills, Canada, p. 38.
Deasy, et. al., World's Nations, p. 155.
Wahl, Geog. of Canada, p. 17.
For vegetation maps, see Wahl, Geog. of Canada, p. 28.
For map of forest types, see Hills and Hills, Canada, p. 86.
For maps of minerals, see Saveland and Glendinning, World Res., West. Hemisphere, pp. 142, 144.
Hills and Hills, Canada, p. 150.
Canadian Dept. of External Affairs, Facts on Canada, p. 18.
For maps of population density, see Hills and Hills, Canada, p. 55.
Deasy, et. al., World's Nations, p. 158.
Borchert and McGuigan, Geog. of the New World, p. 325.
Wahl, Geog. of Canada, p. 36.

G. The significance of location depends upon cultural developments both within and outside the country.

G. A change in situation brings about a corresponding change in the use of a site.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. Natural resources are of little value until man acquires the skill necessary for their utilization or sees a reason for using them.

G. Power for industry is obtained from a number of sources, including water power or steam and electricity produced by burning coal.

G. The growth of factories in a town attract people, stores, etc., which in turn make the area more attractive to new factories and also stimulate the growth of old ones.

G. Cities are likely to grow up if they perform functions which are needed by the surrounding community or for a larger functional region.

air routes, population and major economic activities. Ask them to predict on the basis of these maps, what this city or town will be like. Show them pictures of the city or town and have them check their hypotheses against these pictures and perhaps set up new ones on the basis of what they see in the pictures. Then have a group of pupils investigate textbooks and other references to check these hypotheses further and report back to the class. They should report by indicating which hypotheses were correct and which must be rejected or modified. They should also indicate any other characteristics of the city which pupils have not predicted. In addition, they should tell the class briefly what factors led to the development of the city.

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For maps of major economic activity, see Deasy, et. al., World's Nations, p. 154.
Kohn and Drummond, World Today, p. 202.
For maps of types of agriculture, see Hills and Hills, Canada, pp. 72, 77.
Canadian Dept. of External Affairs, Facts on Canada, p. 20.
For a map of soils, see Wahl, Geog. of Canada, p. 32.
For maps of railroads, see:
Borchert and McGuigan, Geog. of the New World, pp. 328, 338.
Deasy, et. al., World's Nations, p. 168.
Hills and Hills, Canada, p. 118.
For map of air routes, see Hills and Hills, Canada, p. 121.
For map of highways, see Hills and Hills, Canada, p. 116.

Content

A. Vancouver is the largest metropolis of Canada's west coast; it is the third largest city in Canada.

1. Vancouver is located at the mouth of the Fraser River.

   a. It is located in a region of young, rugged mountains which tower 10,000 feet or more.

   b. The coastline is idented with deep fjords.

   c. The region is one of heavy rainfall (between 80 and 250 inches annually).

   d. Vancouver is located where land and water transportation (ship and railroads) meet.

      1) The harbor lies north of the main city; it is deep and sheltered from the ocean.

      2) Trains enter Vancouver from the east and bring products of the plains (grain, cattle, timber, minerals).

2. The Fraser River Valley lowlands are an important farming region. Vancouver serves this hinterland.

3. Current industries include oil refining, power, fishing, lumber.

   a. Many sawmills are automated.

   b. Fish are processed in fewer but larger modern plants than formerly.

   c. The development of power potential may destroy salmon breeding grounds and the fishing industry.

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## Special Materials

Climatic chart in Wahl, Geog. of Canada, p. 21.

For pictures, see:
Filmstrip: Cities of Canada, Eyegate, frames 14-18.
Hills and Hills, Canada, pp. 132, 88, 168, 37.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 140.
Harrington, How People Live in Canada, p. 39.
Nach, Canada in Pictures, p. 18.
Moore, Canada.
Pana-Vu Slides from Sawyer, Inc.
Time, Sept. 30, 1966, p. 31.

4. Vancouver's growth depended upon transportation developments.

   a. The sedentary Indian settlement depended upon the salmon of the streams.

   b. Europeans began arriving in 1791. The history of the white settlement began with the saw mills in the 1860's. The population of Vancouver was about 1,000 when the city was incorporated in 1886.

   c. Vancouver mushroomed after the completion of the second largest transcontinental railroad in 1886. By 1910 there were 100,000 inhabitants.

      1) The Panama Canal provided a connection to Europe.

      2) Although the city is close to the Orient and is a hub for transpacific trade, ties are to the east.

B. Calgary is on the Great Plains close to the Rocky Mountains in the Province of Alberta.

   1. Calgary is close to one of the few passes through the Rockies. Consequently, it became an important railroad center for the east-west railroad lines across the country. It is now a center for north-south rail lines, also.

   2. Calgary has also became an important highway and airline center.

   3. Calgary is a gateway city to the mountains and so serves as a central place to provide retail and wholesale services to some of the recreational centers and lumber camps in the mountains.

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lines, also.

portant highway and airline

the mountains and so serves as a
ail and wholesale services to some
nd lumber camps in the mountains.

For reading material, see:
Tor, Getting To Know Canada, p. 16.
Borchert and McGuigan, Geog. of the World, pp. 328-329.
Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, p. 364.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 136 (Fraser River Valley).
Deyell, Canada--The New Nation, pp. 477-478 (History).
Dominion Bureau of Statistics, Canada 1964, pp. 2, 4.
Wahl, Geog. of Canada, pp. 441-443.
World Book.
Comptom's Pictured Encyclopedia.
Glendinning, et. al., Your Country and the World, pp. 442-443.

For pictures, see:

Borchert and McGuigan, Geog. of the New World, p. 333.
Nach, Canada in Pictures, p. 18.

For reading material, see:

Borchert and McGuigan, Geog. of the New World, pp. 332-334.
Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, pp. 347-348.
Wahl, Geog. of Canada, p. 375.
Glendinning, et. al., Your Country and the World, p. 442.

4. Calgary has many lumber mills to process the logs cut in the nearby mountains.

5. Calgary is in an important wheat farming and cattle country and has grain elevators, flour mills, meat packing plants, and dairy plants. It is also the most important trade center for the farms in southern Alberta.

6. Calgary is close to oil wells which were discovered in the 1940's; it has developed oil refineries and chemical industries which use oil.

7. Calgary is close to coal fields which provide a source for making power.

C. Edmonton is the capital of Alberta and one of the fastest growing cities of Canada. It is located in the Great Plains Region.

1. Edmonton was originally founded as a fur trading center.

a. In 1795 the Hudson's Bay Company located on the north side of the river and named the establishment Fort Edmonton.

b. The fort was destroyed by Blackfoot Indians in 1807; it was rebuilt in 1808.

c. In 1874 another new fort and post were built; they continued for fifty years. In 1874 the North West Mounted Police located there.

2. Rapid development began in 1891 when the Canadian Pacific Railroad reached the North Saskatchewan River.

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atchewan River.

Climatic chart in Wahl, Geog. of Canada, p. 326.

For pictures, see:

Nach, Canada in Pictures, p. 20.
Pan-Vu Slides from Sawyer, Inc.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 146.
Deasy, et. al., World's Nations, p. 166.
Time, Sept. 30, 1966, p. 22.

For reading materials, see:

Glendinning, et. al., Your Country and the World, pp. 441-442.
Wahl, Geog. of Canada, pp. 374-375.

a. The next year Edmonton incorporated as a town.

b. Growth was fast in 1898 when it served as a base for supplies for the Klondike Gold Rush and became the new home for unsuccessful miners.

c. By 1904 Edmonton had 7,000 people and became a city.

d. By 1905 the Canadian National Railroad arrived in Edmonton. Edmonton became the transportation hub in an east-west trade as well as a gateway to the north.

3. Edmonton became the hub of a rich farm and cattle area; it lies on the north edge of the prairies, with wide forests to the north.

4. To a large extent, and much more so before 1940, manufacturing has revolved about agricultural products of the area--meat packing, dairying, flour milling.

5. Edmonton was a coal mining center; however, coal is giving way to natural gas and oil.

6. The biggest boom was the discovery of oil ten miles south of Edmonton in 1947.

   a. Edmonton has the largest oil and gas fields in Canada. It is the center of this industry.

   b. Petroleum refining and chemical industries are important in the city.

7. Power for Edmonton comes from the coal available under the city and from oil and gas piped into the city.

8. Edmonton became an important base for airplanes serving the northern parts of the provinces, especially after W.W. II.

9. Growth during W.W. II began in 1942 when Edmonton became a base for the construction of the Alaska Highway and the Canol Pipeline.

D. Winnipeg is located on the Great Plains on the confluence of the Red River and the Assiniboine River.

1. Winnipeg is the most important railroad center in Canada. It has developed a number of railroad shops to service the railroads.

2. Winnipeg has also become an important highway and air route center.

3. Winnipeg has many factories which process raw materials from its hinterland. These include meat packing plants, dairy plants, and flour mills.

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2 when Edmonton became a
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ns on the confluence of the

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shops to service the rail-

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process raw materials from
t packing plants, dairy plants,

For a large-scale map of railroad and highways coming into Winnipeg, see
Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, p. 346.
Climatic chart in Wahl, Geog. of Canada, p. 21.

For pictures, see:
Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, p. 346.
Hills and Hills, Canada, p. 131.
Borchert and McGuigan, Geog. of the New World, p. 336.
Nat'l. Geog., Dec., 1961, pp. 788-789.
Harrington, How People Live in Canada, p. 39 (stockyards).

For reading materials, see:

Borchert and McGuigan, Geog. of the New World, pp. 336-337.
Whittemore, et. al., U.S., Canada, Latin Am., Pt. I , p. 346.
Hills and Hills, Canada, pp. 131-132.
Wahl, Geog. of Canada, pp. 372-373.
Compton's Pictured Encyclopedia.
World Book.

E. Sudbury is the largest city in northern Ontario; it is located just north of Georgian Bay on Lake Huron.

1. The mainline of the Canadian Pacific Railway and the Soo Line meet in the city. This makes Sudbury a railroad center and has contributed to its growth.

   a. In 1883 those building the first railroad over the area discovered copper ore; soon copper mines were opened.

      1) No natural features dictated the choice of the railroad location through this area of jumbled hills, 200 to 300 feet high.

      2) The site was selected by the Canadian Pacific Railway as a station, only because it was a certain number of miles west of a previous station.

   b. One railroad line now goes to Toronto, the other to Montreal and eastern cities.

2. Today Sudbury is the center of a leading mining district, the Sudbury Basin.

   a. The main region produces 85 per cent of the world's supply of nickel which is needed for steel and is purchased in large quantities by the U. S.

   b. Nickel is not the most important mineral in the region.

For reading n

Borchert and
New Worl

Saveland and
sources,
p. 144.

Wahl, Geog. c
203.

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For reading materials, see:

Borchert and McGuigan, Geog. of the New World, pp. 341-342.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 144.
Wahl, Geog. of Canada, pp. 183-184, 203.

c. The Basin also produces copper, gold, silver, and platinum.

3. The early growth of the town was based upon the copper discoveries; later, after men learned to use nickel, the nickel mines contributed to the growth. The greatest growth has come since 1950, with the increased U. S. demand for nickel because of the Korean War and defense production.

4. Factories manufacture mining equipment and lumber products.

5. The small amount of farming in the area around Sudbury supplies just enough fresh produce for the local area.

F. Toronto is in Ontario Province on the north shore of Lake Ontario.

1. Toronto is an Indian name meaning "the meeting place." Toronto was originally a fur trading post.

2. Toronto has an excellent harbor, the best of western Lake Ontario.

a. The sheltered harbor is on Toronto Bay.

b. The harbor was used by early farmers, who found a good farming area in the region.

c. The harbor was later enlarged and deepened to handle ocean-going vessels.

3. Toronto is the second largest city in Canada.

4. Toronto is an industrial city.

a. It obtains electrical power for factories and for homes from Niagara Falls.

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reased U. S. demand
defense production.

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For a map of downtown Toronto and shoreline, see Comptom's Encyclopedia and Tomkins and Hills, A Regional Geog. of North America, p. 261.

For pictures, see:

Filmstrip: Cities of Canada, Eyegate, frames 5-6.
Nach, Canada in Pictures, p. 9.
Hills and Hills, Canada, p. 170.
Harrington, How People Live in Canada, p. 38 (factory).
Ontario Dept. of Travel and Publicity, Ontario, p. 37.
Canadian Gov't. Travel Bureau, Invitation to Canada, p. 2.
Canadian Dept. of External Affairs, Canada From Sea to Sea, p. 69.
Wahl, Geog. of Canada, p. 94, (cloverleaf on outskirts of city).

b. Four thousand factories line the wharfs and the railroad tracks. Factories produce machinery, electrical apparatus, processed foods, textiles and clothing. Other plants refine oil. Canada is the center of the Canadian book and national magazine publishing business.

c. Home offices for many mining and manufacturing companies are found in Toronto, and the city is the banking center for financing new explorations in northern Canada.

5. The University of Toronto is the largest in Canada; it has high academic standing and medical centers.

G. Montreal is in Quebec Province in the Great Lakes--St. Lawrence Lowland Region.

1. Montreal is located on the headwaters of the St. Lawrence River; rapids above it prevented ships from going further inland until the building of the St. Lawrence Seaway.

2. Montreal is on an island and on the slopes of Mt. Royal.

3. The history of the city dates back to Indian settlements.

a. The Indians were nomadic agriculturalists who cleared new patches when soil became too poor to continue cultivation.

b. French traders,who arrived around 1670, hoped to preserve the habitat of the fur-bearing animals.

c. In 1672 Seigneur Boucher received a land grant from the French king.

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For reading materials, see:

Borchert and McGuigan, Geog. of the New World, p. 346.
Harris, Let's Read About Canada, pp. 21-25.
Ontario Dept. of Travel and Publicity, Ontario, scattered pages include statistics on Toronto.

Wahl, Geog. of Canada, pp. 125-126.
World Book.
Comptom's Pictured Encyclopedia.

For special maps, see:

Borchert and McGuigan, Geog. of the New World, p. 348.
Hills and Hills, Canada, p. 181.
Climatic chart in Wahl, Geog. of Canada, p. 217.

For a map of seigneury, a diagram of a single farm today, and photos of farms to show the layouts of farms today, see Tomkins and Hills, p. 120 (map), p. 148 (diagram), pp. 143, 147, (aerial photos).

For other pictures, see:

Filmstrip: Cities of Canada, Eyegate, frames 1-3.
Hills and Hills, Canada, p. 126.

1) Land was parcelled out along the river with a narrow (600-800 foot) frontage on river and deep fields running away from the shore to the woods.

2) This pattern still prevails.

d. By 1865 other industries had replaced fur-trading. Lumber was king until sawmills moved closer to the source of timber. Then activities related to exporting wheat became important.

4. Today, commerce and manufacturing are the most important activities in the city.

a. Because of its early and long history as Canada's major port, Montreal remains the largest port and also the largest city in Canada. It has a population of over 1,200,000 people.

b. Important industries include flour milling and the refining of sugar and oil.

c. Montreal is a transportation hub for highways and railroads.

5. There remains some dairying and mixed farming in the region.

6. The city is bilingual. People speak both French and English.

H. Quebec is located close to the mouth of the St. Lawrence River.

1. It was the most important harbor on the Atlantic until the river was deepened so that ocean-going vessels could go up the river as far as Montreal. The city is still an important port-city.

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Nach, Canada in Pictures, pp. 8, 10.
Nat'l Geog., May, 1967, pp. 600-625.
Nat'l Geog., Dec., 1961, pp. 798-799.
Pana-Vu Slides from Sawyers, Inc.

For reading material, see:

Borchert and McGuigan, Geog. of the New World, pp. 348-350.
Wahl, Geog. of Canada, pp. 253-255.
Comptom's Pictured Encyclopedia.
World Book.
Glendinning, et. al., Your Country and the World, pp. 438-439.

For pictures and reading materials:

Filmstrip: Cities of Canada, Eyegate, frames 7-12.
Hills and Hills, Canada, pp. 58, 124-125.
Nach, Canada in Pictures, p. 7, p. 62 (asbestos mine near Quebec).

2. The city was originally an important fort guarding the entrance to the St. Lawrence River. The fort is on the hill which now overlooks most of the city.

3. The city was settled by the French and still shows the extensive French influence.

4. Quebec is close to a number of minerals.

   a. Asbestos mines are found about fifty miles south of Quebec.

   b. Copper, silver, lead, and zinc are found south of Quebec.

5. Quebec is an important industrial city.

I. Halifax is the capital of Nova Scotia.

1. Its harbor is ice free during the winter; consequently it ships in and out goods during winter months which wo be handled by Montreal and Quebec during the other mo These ports are closer to the population centers than Halifax.

2. Halifax serves as a central place for shipping goods t and from many towns and fisheries along the coast.

3. Halifax has developed a number of factories.

4. Halifax was aided by the fact that it was on air route tween the U. S. and Europe prior to the development of planes. It is still aided by its good airline facilit

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Nat'l. Geog., Dec., 1961, pp. 804-805.
Nat'l. Geog., May, 1967, pp. 652-653.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 155.
Whittemore, et. al., U. S., Canada Latin Am., Pt. I, p. 334.
Nat'l. Geog., Oct., 1949, pp. 440-444 (city), p. 453 (asbestos mine nearby), p. 462 (pulpwood pile).
Canadian Gov't. Travel Bureau, Invitation to Canada, p. 10.
Wahl, Geog. of Canada, p. 256-257.
World Book.
Compton's Pictured Encyclopedia.

Climatic chart in Wahl, Geog. of Canada, p. 21.

For pictures, see:

Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, p. 339.
Borchert and McGuigan, Geog. of the New World, p. 370.
Canadian Gov't. Travel Bureau, Invitation to Canada, p. 7.
Wahl, Geog. of Canada, p. 312.

For reading, see:

Whittemore, et. al., U.S., Canada, Latin Am., Pt. I, p. 339.
Wahl, Geog. of Canada, pp. 311-312.
World Book.
Compton's Pictured Encyclopedia.

5. Gypsum mines near Halifax were opened in the 1940's
provide gypsum for the U.S. for such things as plas
board, and casts.

J. St. John's is located on an excellent harbor in Newfou

1. The harbor is only rarely blocked by ice when a sou
wind drives ice into the narrow eastern channel.

2. St. John's is close to the fishing banks, and the c
an important fish-processing industry as well as in
engaged in ship building and the manufacture of mar
fishing equipment.

3. The city also has plants engaged in sugar refining,
fining, making clothing, making machines and batter
electronics, etc.

4. St. John's has a nearby source of power, including
water power.

5. Some land close to St. John's is used for farming.

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well as industries
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refining, oil re-
and batteries,

including coal and

farming.

For a railroad and resource map of Newfoundland, see Tomkins and Hill, Reg. Geog. of North Am., p. 51.

For pictures, see:

Filmstrip: St. John's--Newfoundland, Eyegate.
Filmstrip: Cities of Canada, Eyegate, frame 30.
Nat'l. Geog., Dec., 1961, pp. 818-819.
Pana-Vu Slides from Sawyer, Inc.
Canadian Gov't. Travel Bureau, Invitation to Canada, p. 2.

For reading materials, see:

Pamphlet, St. John's, North America's Oldest City, Newfoundland Tourist and Development Office, St. John's 1961, pp. 50-53, p. 54.
Wahl, Geog. of Canada, pp. 311-312.
World Book.

OBJECTIVES

Skills

S. Uses atlas index to locate places.

S. Interprets map symbols in terms of map legend.

Generalizations

G. The world is a community of interdependent countries.

G. What a country produces will depend upon demand ( or how much of the product people will buy) as well as upon available resources and labor and capital.

OBJECTIVES

Generalizations

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

G. A number of factors--climate, surface features, natural resources, accessibility, and history--affect settlement and growth patterns.

G. The significance of location depends upon cultural developments both within and outside a country.

G. Climate may set up limitations upon man's activities, given a specific level of technology, but man has learned to overcome many of the earlier limitations.

G. The topography of a region may present limitations given a specific level of technology.

G. Natural resources are of little value until man acquires the skill necessary for their utilization or sees a reason for using them.

G. Man changes the character of the earth.

G. Transportation facilities are usually developed to connect population centers, although at times they are developed to open up areas of important resources for development.

PROCEDURES AND CONTENT

II. Towns and Cities Opened Up Because of New Discoveries, New Inventions or Technology, Increased Demand for Products, or Defense Needs.

Teaching Procedures

Tell the class that they are now going to turn to towns cities which were developed for a variety of reasons, mo in rather recent times.

Have each group which has investigated one of these town present its information in the most interesting form pos Pupils should be sure to locate the town on a map for th class. They should also use maps and pictures to illust their reports. Preferably, they should try to have pupi examine the maps first to try to figure out why a town m be built in this area. Then they should present their i formation about the town.

These groups should be selected earlier in the unit and should be prepared to report at this time.

MATERIALS

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map for the
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Use the same maps suggested for the study of major cities of Canada.

Content

A. Kitimat, British Columbia, is the newest large city
Canada; it was built from scratch for the developme
an aluminum plant.

1. It is located on the Kitimat River arm at the en
Douglas Channel.

2. The city's potential was recognized, and a city
planned by engineers. The city has been in exis
only since 1951, and the plant was opened, altho
not completed, in 1953.

a. Kitimat was built to provide a city for an al
plant, even though there is no bauxite in the
from which to make the aluminum.

b. The site was chosen for the following reasons

1) It is only 50 miles from the Kemano power
which uses water backed up on the Nechacko
so that it would plunge great heights down
made water fall in the mountains.

2) There is enough level land for a townsite.

3) It has an excellent deep-sea harbor.

4) It is only 40 miles away from the Canadian
Railroad; it is now linked to this railroa

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nadian National
ailroad at Terrace.

## Special Materials

For a map of the town, see Appendix.

For pictures, see:

Boyer, "Kitimat--Canada's Aluminum Titan," Nat'l. Geog., Sept., 1956, pp. 376-398.
Canadian Dept. of External Affairs, Canada, From Sea to Sea, p. 34.
Report of Distiller's Corporation, Awakening North, p. 21.
Nach, Canada in Pictures, p. 16.
Hills and Hills, Canada, p. 108.

For reading material on the aking of aluminum in general, see World Book and Compton's Pictured Encyclopedia.

For reading material on Kitimat, see
Boyer, "Kitimat--Canada's Aluminum Titan," Nat'l. Geog., Sept., 1956, pp. 376-398.
Whittemore, et. al., U. S., Canada, Latin Am., Pt. I, pp. 362-364.

3. The aluminum smelter is supplied with power from the Nechako-Kemano power project. This project, with a huge electrical capacity and even greater potential, was built in five engineering steps.

   a. A rock and earth dam was built across the Nechacko River near Vanderhoof. This dam backs up the water on the river and makes it flow up stream.

   b. A ten mile tunnel was bored through the range of coast mountains.

   c. The largest man-made cavern inside a mountain was hollowed out at Kemano to house eight generators.

      1) One half million tons of rock base had to be removed from the granite mountain.

      2) The water falls plunge downward 2,600 feet or sixty times as far as do the Niagra Falls.

   d. A fifty mile power line was built to withstand the elements; it stretches through the mile-high Kildala pass to the smelter.

4. Building began for a planned community of 50,000 people, although the city is not yet that size.

   a. The town was built from scratch.
   b. Helicopters supplied transportation for men and supplies.
   c. The smelter was built five miles from the town's center; it is connected with the town by a road and a 600 foot bridge which crosses the Kitimat River.

B. Schefferville is a city in the province of Quebec and is located at 55 degrees north latitude, close to the Labrado border.

1. It is the home of the Montagnais Indians and was sparse populated before 1950.

2. The region has long winters with an average of 100 inches of snowfall per year.

3. Since 1954 a railroad has linked Schefferville with Sev Islands, which has become an important water shipping center.

4. Schefferville (originally called Knob Lake) was constructed by a mining company in the early 1950's after the decision was made to mine the iron ore of the regio The town was incorporated in 1954.

   a. Huge open pit mines of high grade ore (60% iron) are found in quantities to last through the 1900's. Low grade ore is available in even greater quantity. Estimates indicate that 200,000,000 tons of ore lie within two miles of the town.

   b. Mining operations can continue for only 180 days annually. This raises the cost of mining the ore.

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Pupils should be sure to use a railroad map. (e.g., Borchert and McGuigan, Geog. of the New World, p. 361.

For pictures, see:
Ross, "Knob Lake on Canada's New Frontier," Canadian Geographical Journal, June, 1957, pp. 239-243.
Borchert and McGuigan, Geog. of the New World, p. 363.

For reading materials, see:
Ross, "Knob Lake on Canada's New Frontier," Canadian Geographical Journal, June, 1957, (For good readers).
Borchert and McGuigan, Geog. of the New World, p. 363.
Hills and Hills, Canada, pp. 103-104.

c. Ten million tons of ore are expected to be
by railroad each year.

C. Port Radium, in the Northwest Territory, is a mi
the eastern shore of Great Bear Lake.

1. It is located on the side of a cliff on the s
Lake.

2. The possiblility of a town developed when Gil
an explorer and prospector, found veins of hi
pitchblende in 1930. Radium is extracted fro
Radium sold for $75,000 per gram at that time
mine opened, the price of radium dropped to h
had been.

3. Problems in building a mine and a community f
the mine were overcome primarily by the use o

4. The airplane continued to be used part of the
bearing ore was flown to Edmonton, and supplie
to the mine and town.

5. When navigation routes were ice-free, Great B
Mackenzie River were used to provide less exp
portation to railroads in southern Canada.

6. The Eldorado Gold Mines Ltd. continued operat
through the 1930's, until the market was wipe
German occupation of France which had been pu
of the radium. The mine was forced to close
with the exception of two men, the town becam

pected to be shipped out

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de less expensive trans-
Canada.

nued operation of the mine
ket was wiped out by the
had been purchasing most
d to close in the 1940's;
town became a ghost town.

For a map showing water route to Port Radium, see Borchert and McGuigan, Geog. of the New World, p. 361.

For pictures see:

Report of Distillers Corporation, The Awakening North, p. 17.
Lands and Peoples--The World in Color, Vol. 6, Canada--The United States, p. 147.
White and Foscue, Reg. Geog. of Anglo America, p. 255.

For reading materials, see:

Wahl, Geog. of Canada, p. 470.
Ross, Land and People of Canada, pp. 54-57.
White and Foscue, Reg. Geog. of Anglo America, p. 256.
Smith, World of the Arctic, pp. 51-52.

7. With demand for uranium, a new rush began to the v
and the government reopened the mine under the nam
Company.

8. Although the demand and hence production of uraniu
been declining, Port Radium is still an important
for uranium mining.

D. Inuvik is a village of 1,248 people, located in the N
Territory near the Yukon Border, 75 miles southeast o
Sea.

1. The original village of Aklavik grew up around a H
trading post.

a. This is the world's largest fur trading post; 3
may be exchanged here each year.

b. Aklavik is an Eskimo word meaning "where there

c. The original settlement of Aklavik was on the W
of the Mackenzie River and was begun in 1912.

d. During 1919-1926 Aklavik was expanded to serve
istration, communications, and education center
ment began building part of the air defense sys

e. Aklavik was (and still is) the center of the re
industry; the government and private herds are
Eskimos.

2. Between 1954 and 1958 the town was partly moved by
government to a site 35 miles away on the East Cha
Mackenzie River. Its name was changed to Inuvik,
"the place of man."

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For map showing air route to the town, see:
Wahl, Geog. of Canada, p. 479.

For map showing water routes to the town, see:
Borchert and McGuigan, Geog. of the New World, p. 361.

For pictures, see:
Robertson, "Aklavik--A Problem and Its Solution," Canadian Geographical Journal, June, 1955. (See especially, pp. 196-205.)
Moore, Canada, p. 111.
Hare, "Banks Island: Eskimo Life on the Polar Sea," Nat'l. Geog., May, 1964, (See especially, pp. 722, 723.)
Dominion Bureau of Statistics, Canada, 1964, p. 11.
Harrington, How People Live in Canada, p. 44.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 138.

a. It was moved in part because flooding had become a health and construction problem; silt affected buildings, roads, the airfield, sewers, and water.

b. Permafrost affected the buildings and road construction.

c. Inuvik provided a better airfield site.

d. Aklavik did not become a complete ghost town and may never be abandoned completely.

3. In selecting a new site, the eight man governmental survey team considered the following eleven factors:

a. Essential factors.

1) economic and social suitability
2) suitability of ground for sewers, roads, etc.
3) access to good river channel
4) availability of airfield site
5) water supply

b. Highly desirable factors.

1) possibilities for sewage disposal
2) availability of gravel and sand for building
3) trans-shipment point from river to seagoing vessels

c. Desirable factors.

1) available wood supply
2) available coal supply
3) available hydro-electric power site

4. Inuvik is becoming a modern town.

For reading materials, see:
Robertson, "Aklavik--A Problem and Its Solution," Canadian Geographical Journal, June, 1955. (For only the best readers.)
Harrington, How People Live in Canada, p. 44.
Wahl, Geog. of Canada, p. 480.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 138, 137.
Smith, World of the Arctic, pp. 49-51.
See Appendix.

a. It has a large permanent airport and a seaplane base.

b. It has a radio station which transmits in three languages: English, Eskimo, and Loucheux (Indian).

c. It has a meteorological station.

d. It has a hospital, churches, and residential schools for Eskimo and Indian children.

e. The population increases when Eskimo fishing boats return after the ice is broken.

E. Steep Rock Iron Mine is located around 140 miles from Port Arthur fairly close to the Minnesota Border.

1. The mine is one of the largest iron mines in Anglo-America. It has both open pit mines and underground mines.

2. Men drilled through the frozen ice on the lake to find out how much iron ore lay at the bottom of the lake.

3. A dam diverted the waters of the river which fed the lake, and then the 15 mile long, 130 foot deep lake was drained.

4. Iron ore is shipped to Port Arthur where it is shipped by boat to eastern cities.

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For map locating Steep Rock, see:
Wahl, Geog. of Canada, p. 184, or
Saveland and Glendinning, World Resources, Western Hemisphere, p. 142.

For pictures, see:
Hills and Hills, Canada, p. 103.
Canadian Dept. of External Affairs, Canada From Sea to Sea, pp. 44-45.
Wahl, Geog. of Canada, p. 185.

For reading material, see:
Hills and Hills, Canada, p. 104.
White and Foscue, Reg. Geog. of Anglo-America, p. 267.
Wahl, Geog. of Canada, p. 185.
Borchert and McGuigan, Geog. of the New World, p. 339.
Saveland and Glendinning, World Resources, Western Hemisphere, p. 142.

OBJECTIVES

S. Generalizes from data.

S. Interprets maps (scale, symbols, grid).

S. Checks accuracy of information against a background of facts.

G. Man uses his physical environment in terms of his cultural values, perceptions, and level of technology.

A. IS SCEPTICAL OF CONVENTIONAL TRUTHS AND DEMANDS THAT WIDELY-HELD AND POPULAR NOTIONS BE JUDGED IN ACCORDANCE WITH STANDARDS OF EMPIRICAL EVIDENCE.

TEACHING PROCEDURES

Culminating Activities for Unit on Canada.

1. Ask: What do you think are the most important ideas you have gained from the study of Canada? (List on board. If pupils suggest specifics about Canada itself, get them to generalize more broadly in a second list.e.g. Did you learn any ideas which do not relate just to Canada? Did you see any similarities between kinds of things you learned from your study of the U.S. and of Canada? etc.)

2. Give pupils a test based on an imaginary island or on Australia, which they have not studied. They should be asked to interpret maps of this island or of Australia in order to answer questions in the test.

3. Ask pupils to imagine that they attend a speech in which a man makes the statement that the physical features of a country determine how men lived in that country. They should write a brief statement of what they would say about this statement if they were called up to the platform as an expert on geography. Read aloud several of the pupils' statements and discuss. Or find a statement which presents a geographical determinist point of view about some other country or area. Have pupils analyze the statement. Without studying this other country, what questions would they raise about the statement?

4. Appoint a follow-up committee (of volunteers) to keep track of current news about Canada and to report to class at times or to keep up on-going bulletin board about news and comment on the items to the class when appropriate.

I. Textbooks for Pupils

* Borchert, John R. and Jane McGuigan. _____ raphy of the New World. New York: ____ McNally and Co., 1961. (In chapter ____ of Us--Canada," pages 321-376, the r____ travels across the country by regio____ west to east, then north. Text is ____ recommended for use with this unit.

Cooper, Kenneth, and Clarence Sorenson, ____ The Changing New World. Morristown ____ Burdett, 1964. (Chapter 27, "Canada ____ pages 380-394, presents a brief reg____ ment of the country by provinces; h____ cellent map of land usage on pages ____

Crabtree, Esther with Ernest W. Tiegs ____ Adams. Understanding Your Country ____ Boston: Ginn, 1964. Pages 430-498. ____ nine, "Canada Our Friendly Neighbor ____ is composed of four chapters -- the ____ whole, along the waterways, the pra____ combined section on the west and no____ ful text for the unit.)

Cutright, Prudence and John Jarolimek, ____ King, Ida Davis, and Florence Potte____ the Americas. New York: Macmillan ____ Pages 426-445. (Brief overview of ____ climate, history, government and ho____ are used in the various provinces t____

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* Referred to directly for specific un____

BIBLIOGRAPHY

Fraser, Dorothy and Harry Hoy. Our Hemisphere. (ABC Social Studies Series). New York: American Book Company, 1961. (Chapter 12, "Canada - Neighbor to the North," on pages 330-363 treats the history of Canada and the government, briefly covers land, ways of making a living in the various provinces, changes in Canada, and closes with Canadian and U. S. relations. Easier reading than many, but few pictures and maps.)

Gray, William H. and Ralph Hancock, Herbert H. Gross, Dwight H. Hamilton, and Evalyn A. Meyers. Exploring American Neighbors in Latin America and Canada. Chicago: Follett, 1963. (After an introduction to the total picture, the next four chapters take the reader regionally from east to west, then north, across the country. Excellent maps. Useful in this unit.)

Hills, Theo. L. and Sarah Jane Hills. Canada. Grand Rapids: Fideler, 1962. (Excellent treatment of regions, climate, industries, people, and transportation through text, pictures and maps. Pertinent black and white photographs of large size. Many activity scenes in industries.)

Patterson, Franklin, Jessamy Patterson, C. W. Hunnicutt, Jean D. Grambs, and James A. Smith. This is Our Land. Syracuse: L. W. Singer Company, 1963. Pages 443-457.

(Chapter 23,"Canada: A Not-So-Sleepy Giant," draws likeness and differences between the U. S. and Canada, gives history and geographical trip, discusses Canada's independence, and closes by presenting an overview of the provinces and territories. Treatment of all is brief.)

* Whittemore, Katherine Thomas, Marguerite Uttley, and Alison E. Aitchison. The United States, Canada, Latin America. Boston: Ginn, 1962. Pages 293-348. (Regional structure of text similar to organization in unit. Some case studies of limited coverage included. Would be useful supplementary text.)

II. Secondary School and College Textbooks Useful For Maps and Pictures.

* Deasy, George, et. al. The World's Nations. Philadelphia: Lippincott, 1958. (Out of print but useful if available.)

* Kohn, Clyde and Dorothy Drummond. The World Today, Patterns and Cultures. New York: McGraw-Hill, 1963. (High school text.)

* Saveland, Robert and Robert Glendinning. World Resources, Western Hemisphere. Boston: Ginn, 1966.

* Tomkins, G. S. and T. L. Hills. A Regional Geography of North America. Toronto: W. J. Gage Ltd., 1962.

* Wahl, Edward. This Land. Toronto: Oxford Univ. Press, 1961.

White, C. L. and E. J. Foscoe and T. L. McKnight. Regional Geography of Anglo-America. Englewood Cliffs: Prentice-Hall, 1964 ed.

III. Pamplets

Canada, . . . Land of Hope. Montreal: Canadian Chamber of Commerce, 1964, p. 44. (Narrative, without illustrations, touches upon the history, geography, people, and economic activities today.)

Canadian Government Travel Bureau. Invitation to Canada. Ottawa: Queen's Printer, p. 49. (Beautiful full color photographs of Canadian beauty in open country, village, and city.)

Canadian Government Travel Bureau. Canada--Vacations Unlimited. Ottawa: Queen's Printer, p. 49. (Offers full color pictures on the following which may be useful in the unit: Tadoussac, Vancouver, Laurentians of Quebec, Canso Causeway, and Petty Harbor.)

Department of External Affairs. Canada From Sea to Sea. Ottawa: Queen's Printer, 1963, p. 43. (The land, people, ways of making a living, government, culture, education, science, economy are covered with excellent photographs for each section.)

Department of External Affairs. Facts on Canada. Ottawa: Queen's Printer, 1963, p. 43. (Includes narratives and maps for many aspects

of study including geography, population, resources, agriculture, forestry, fisheries, etc. Chronology of Canadian history 1497-1963 also presented.)

Department of External Affairs. The St. Lawrence Seaway. Ottawa: Queen's Printer, 1960, p. 34. (Traces the use and development of the St. Lawrence water route from early days to the present. Many old illustrations and current photographs.)

Dominion Bureau of Statistics. Canada 1964, the Official Handbook of Present Conditions and Recent Progress. Ottawa: Queen's Printer, 1964, p. 311. (Covers current information about the people, industry, and business through narrative, photographs, and charts.)

Hare, Kenneth. Canada. (Around the World Program). Chicago: Nystrom, 1964. (Covers history, government, and regions in classroom pamphlet form).

Ontario Department of Travel and Publicity. Ontario.

U. S. Department of State. Canada, Free World Partner. (Background Series). Washington, D.C.: Government Printing Department.

## IV. Books of Non-Fiction on the Arctic

Berrill, Jacquelyn. Wonders of the Arctic. New York: Dodd-Mead and Co., 1959. (More mature text describes the lands, seas, and creatures of the Arctic.)

Bleeker, Sonia. The Eskimo, Arctic Hunters and Trappers. New York: Wm. Morrow, 1959. (Describes the people, their ways of making a living, and their recreations.)

Brewster, Benjamin. The First Book of Eskimos. New York: Watts, 1952. (Large marginal and partial page illustrations with captions about everyday activities and implements centering on the hunt.)

Copeland, Donald McKillop. The True Book of the Little Eskimos. Chicago: Children's Press, 1953. (Simple text and illustrations, covering tools, clothing, transportation, vegetation, igloos, and hunting.)

Crisler, Lois. Arctic Wild. New York: Harper and Brothers, 1958. (Personal account of animal photographing mission into the northern wilderness. Although difficult to read by the class, the book has excellent first-hand photographs which would interest fifth-graders.)

Euller, John. Arctic World. New York: Abelard-Schuman, 1958. (The ocean, land, and people of the Arctic covered. Makes reference to the Copper Eskimos on p. 64 and pp. 79-80. Useful narration about exploration of Arctic. More difficult reading.)

Freuchen, Pipaluk. Eskimo Boy. (translated from Danish). New York: Lothrop, Lee, and Shepard Co., Inc., 1951. (Story of the hunt for walrus and dangers of the mission.)

Glubok, Shirley. The Art of the Eskimo. New York: Harper and Row, 1964. (Description of Eskimo art which almost always shows the hunter or the hunted. Full page and smaller photographs; little text.)

Goetz, Delia. The Arctic Tundra. New York: Morrow, 1958. (Emphasis upon the animals of the Arctic and the hunting trapping of the Eskimo.)

Harrington, Lyn. Ootook, Young Eskimo Girl. New York: Abelard-Schuman Ltd., 1956. (Outstanding illustrations of the Eskimos' trapping and trading livelihood.)

Lineaweaver, Charles. The First Book of Canada. New York: Watts, 1955.

Ogle, Ed. Getting to Know the Arctic. New York: Coward-McCann, Inc., 1961. (Defines the Arctic region and illustrates everyday experiences of today's Eskimo.)

Pine, Tillie S. and Joseph Levine. The Eskimos Knew. New York: McGraw (Wittlesey House), 1962. (Compares Eskimos' everyday experiences with what we can do today to explain what they knew. Actual experiments expected to be conducted by the reader.)

Smith, Frances C. The World of the Arctic. (Portraits of the Nations Series). Philadelphia: Lippincott, 1960. (Defines Arctic, discusses exploration, land of region, and life of the Eskimo.)

Tolboom, Wanda. People of the Snow, Eskimos of Arctic Canada. New York: Coward-McCann, 1956. (Daily life and survival in the harsh environment are seen through the experience of an Eskimo hunter and his family.)

Viereck, Phillip. Eskimo Island, a Story of the Bering Sea Hunters. New York: John Day, 1962. (Artist illustrated in blue and orange, the book describes the ways of the northern hunters. Includes a picture dictionary of Eskimo words.)

V. Other Books of Non-Fiction

* Bixby, William. Skywatchers, the U. S. Weather Bureau in Action. New York: McKay, 1962. (Reference made on pages 127-128 to U. S.--Canadian cooperation in weather observation and forecasting.)

Bonner, Mary Graham. Canada and Her Story. New York: Knopf, 1954. (Emphasis upon early discovery, exploration, and extension of fur trade in Canada.)

Bonner, Mary Graham. Made in Canada. New York: Knopf, 1943. (Includes handicrafts and legends of Indians and home art and song of the settlers.)

Bullock, F. J. Ships and the Seaway. Toronto: J.M. Dent and Sons Ltd., 1959. (Part I, entitled "Navigation in the St. Lawrence River and the Great Lakes," covers the history,

development, and description of current navi-
gation. Part II introduces the reader to the
various steamship lines using the Seaway fa-
cilities.)

Denis, Keith. Canoe Trails Through Quetico. To
Quetico Foundation, 1959. (Useful reference
pupil who is curious about plans and provisio
necessary for a canoe trip north of Minnesot
along the Rainy River district.)

* Harrington, Lyn. How People Live in Canada.
Chicago: Benefic Press, 1965.

Harrington, Lyn. The Real Book About Canada.
York: Garden City, 1959. (Presents overvie
of Canada, then moves westward by region and
province; contains a few small black and whi
sketches.)

Harris, Leola and Kilroy. Let's Read About Can
Grand Rapids: Fideler, 1949. (Although tex
limited and somewhat dated, book contains ex
cellent photographs of the country and peopl
Chapter one covers the geography of Canada,
other chapters offer material on Toronto, Qu
and Montreal.)

Hunter, George and Leslie Roberts. Canada in C
Toronto: Clarke, Irwin and Co. Ltd., 1959.
(Attempts to cover the variety in land, peop
and resources of Canada. This is accomplish
through outstanding color photographs and te
Some exceptionally useful pictures for the u
are ones on the prairie wheat fields, Ungava
and Kitimat.)

Hutton, Clarke. A Picture History of Canada. New York: Franklin Watts, 19[illegible]. (Large colorful artist's sketches and brief narration cover Canada's history from days before Columbus to the present.)

Land and Peoples - The World in Color, Vol. 6. Canada - The United States. New York: Grolier, 1963, pp. 4-16, 32-151. (Text is difficult for children, but many pictures are included which would be useful for studying cities of Toronto, St. John's, Montreal, Edmonton, and one of Port Radium.)

Lauber, Patricia. Changing the Face of North America, the Challenge of the St. Lawrence Seaway. New York: Coward-McCann Inc., 1959. (The need for actual building of the Seaway in pictures and narrative. Many excellent diagrams and illustrations. History of early use included.)

Leitch, Adelaide. Canada Young Giant of the North. New York: Thomas Nelson and Sons, 1964. (The land, people, their work, and the north as seen by today's immigrant. Many photographs illustrate text.)

Little, Jean. Mine for Keeps. Boston: Little, 1962.

McNeer, May. The Canadian Story. New York: Ariel Books, 1958. illus. Lynd Ward. (Although historical development is stressed, natural resources and their development are included consistently throughout. Good for an introduction to Canada as a land of contrasts and variety.)

* Meyer, Edith Patterson. The Friendly Frontier. Boston: Little, 1962.

Moore, Brian. Life World Library - Canada. New York: Time, Inc., 1963. (Excellent color photographs for study of prairie, Vancouver, Kitimat, and Inuvik.)

* Nach, James. Canada in Pictures. New York: Sterling Publishing Co., 1966.

Olson, Sigurd F. Runes of the North. New York: Knopf, 1963. (A Minnesota author and naturalist writes for the adult about his adventures canoeing through the Great Bear Lake McKenzie River region and gives an excellent account for feeling the spirit of the gold miner and mining today. Parts could be read aloud.)

Quinn, Vernon. Picture Map Geography of Canada and Alaska. Philadelphia: Lippincott, 1954. (Separate chapters cover each province and territory. Gives brief history, geography, important cities, products, and resources. Simple style, well-written but without special literary quality. Provincial maps with pictorial representations are helpful.)

Ross, Frances Aileen. The Land and People of Canada. Philadelphia: Lippincott, 1954. (Covers land, history, and people of a rapidly developing nation including discussion of provinces. Series of black and white photographs in middle of book.)

Swayze, Fred. Frontenac and the Iroquois. New York: St. Marin's Press, 1959. (History of Frontenac's fighting governorship of Quebec.)

VI

Syme, Ronald. Champlain of the St. Lawrence. New York: Morrow, 1952. (Biography of Champlain with quotes from writings of his experiences in beginning the first French settlement in America. For the better reader.)

Tallant, Robert. Evangeline and the Acadians. (Landmark). New York: Random House, 1957. (The French settlement of Acadia (Nova Scotia) told as well as their cruel fate at the hands of the English and final settlement in New Orleans.)

Tor, Regina. Getting to Know Canada. New York: Coward-McCann Inc., 1957. (Treats country regionally with slightly different approach than unit. Written with a literary quality and has line illustrations which add flavor to the text.)

Toye, William. The St. Lawrence. New York: Henry Z. Walck, Inc., 1959. (Following brief geological development, there is an extensive account of the discovery, settlement of the St. Lawrence region. For the more mature reader.)

VI. Fiction and Poetry

Carlson, Natalie Savage. Alphonse, that Bearded One. New York: Harcourt, 1954. (Third through fifth grade story of the early days in New France when a gun shouldering bear took his master's place in a war.)

Carlson, Natalie S. Talking Cat and Other Stories of French Canada. New York: Harper, 1952. (A collection of seven humorous French Canadian tales for reading and story telling.)

Hogeboom, Amy. Treasure in Gaspesy. New York: Dutton, 1939. (Daily family life of Gaspesy French Canadians centered about nine year old Philippe, his brothers and sisters, and friends. Folk tales of area woven into story which has no plot-- mere narration of a series of visits,e.g. to store, lighthouse, bird islan berry picking. Good for recreational reading.)

* Holling, Clancy. Paddle-to-the-Sea. Bost Houghton-Mifflin Company, 1941. (Colorful, ful page, illustrations with marginal black and whi sketches. Fine for use when studying the Nipig and St. Lawrence River areas. Lumber industry well-portrayed.)

Meader, Stephen W. Trap-line North. New York: I Mead and Co., 1952. (Set northeast of Lake Nip The reader travels on a Canadian trapping exped Black and white marginal illustrations describe the animals of the region.)

O'Brien, Jack. Silver Chief Dog of the North. Ph delphia: Winston, 1933. Illus. Kurt Wiese. (Exciting adventure set in the far north of a Royal Canadian Mounted Police bringing a crimi to justice... with the aid of Silver Chief, the wolf-dog.)

Service, Robert. The Complete Poems of Robert Ser New York: Dodd-Mead and Co., 1950. (The Spell

the Yukon and Other Verses in book one may be useful for work with the more advanced pupils.)

Van Stockum, Hilda. Canadian Summer. New York: Viking, 1948. (Family story about the Mitchells who move from the United States to Montreal.)

Van Stockum, Hilda. Friendly Gables. New York: Viking, 1960. (Sequel to Canadian Summer. The Mitchells, now living in Montreal, have twin boys, making their family grow to ten.)

VII. Articles

* Boyer. "Kitimat--Canada's Aluminum Titan," National Geographic, Sept., 1956, pp. 376-398.

Egoff, S. A. and R. A. Hagler. "Look Northward," Library Journal, 88:4426-8. November 15, 1963. (Article contains an annotated bibliography of books on Canada, most of which are available through Canadian publishers. Many titles are difficult to locate in local libraries.)

* Hare, Clyde. "Banks Island: Eskimo Life on the Polar Sea," National Geographic, May, 1964, pp. 702-735. (Excellent photographs of Eskimo life today and white man's existence among the Eskimo.)

"The Hemisphere--Canada: British Columbia, a Century of Progress and Prosperity." Time, October 27, 1958, pp. 702-735. (Emphasis of article is upon the growth of the region during World War II and aftermath. Contains a six-page spread of color photographs.)

* Robertson, R. Gordon. "Aklavik - A Problem and Its Solution," Canadian Geographical Journal, June, 1955. (Most useful article in presenting the problems facing Aklavik with the construction of the DEW line and necessity for relocation of the town.)

* Ross, W. Gilles. "Knob Lake on Canada's New Frontier," Canadian Geographical Journal, June, 1957. (Development of the Schefferville region is clearly presented with accompanying useful photographs.)

Watson, J. W. "The Land of Canada," Canadian Geographical Journal, April, 1956, pp. 2-31. (Excellent introduction for the adult exploring Canadian geography. Structures the physiographic regions and develops understanding for land form and resource of each.)

Also see articles on Canada in:

Life, March 1, 1963.

* National Geographic, Dec., 1961 and May, 1967.

Time, Sept. 30, 1966.

VIII. Reference Books

Canadian Almanac and Directory, 1965, (118th edition). Vancouver: Copp and Clark, 1965. (Although not as complete as the official Canadian census, this publication is a more accessible source of population and other statistics.)

Compton's Pictured Encyclopedia.

Encyclopedia Canadian. Ottawa: Grolier, 1957. (Useful for background information on all topics, but was used to find basic material on communities selected for case studies.)

The World Almanac, 1965 and Book of Facts. New York: New York World-telegram Corporation.

World Book.

IX. Audio-Visual Materials

A. Films

1. Canadian National Film Board

Atlantic Region - 23 min.
Gaspe Cod Fishermen (older film, but excellent for portraying preparation of product for market.)
Great Lakes - St. Lawrence Lowlands - 23 min.

Great Plains - 23 min.
Mountains of the West - 20 min.
Physical Regions of Canada - 23 min.
Precambrian Shield - 26 min.
Winter in Canada - 18 min.

2. Coronet

Geography of the Americas - 13½ min.
Industrial Canada - 16 min.

3. Encyclopedia Britannica Films

Canada: the Atlantic Provinces - 16 min.
Canada: the Industrial Provinces - 17 min.
Canada: the Pacific Provinces - 16 min.
Canada: the Prairie Provinces - 16 min.
Wheat Country - 20 min.

B. Filmstrips

1. Eyegate House - Canada: a Regional Study

Historical Background
Geographic Background
Transportation
Trade and Agriculture
Lumbering
Other Industries
The People in School and at Play
Cities of Canada
Attraction for Visitors

2. Scribner - Canada--Treasure Land of the North

Canada from Sea to Sea

Canada - Our Good Neighbor to the North
Canadian Handicrafts
Canadians at Work I
Canadians at Work II
History of Canada
People of Canada

3. Society for Visual Education - Canada:
Regions and Resources

British Columbia and the Yukon
Prairie Provinces and the Northwest Territories
Ontario and the St. Lawrence Seaway
Quebec and the Atlantic Provinces

C. Slides

1. Commercially prepared slides and catalog are available from:

Sawyers, Inc.
Box 444
Portland 7, Oregon

Includes 35 mm slides of Vancouver, Edmonton, Manitoba and rural scenes, Montreal, Nova Scotia, St. John's, etc.

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